

INTERNATIONAL SEARCH REPORT

PCT/US 03/00741

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04R1/40 H04R3/00 //H04R5/027

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 869 697 A (LUCENT TECHNOLOGIES INC) 7 October 1998 (1998-10-07) page 3, line 44 -page 15, line 38 abstract	1-6, 9-12,14, 15,19, 21, 23-25, 27-36, 39-42, 44,47-50
Y		16-18, 20,22, 45,46, 51-57, 60-63, 65-75
A		7,8,13, 26,37, 38,43, -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

5 May 2003

Date of mailing of the international search report

03.06.2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

HENRIK ANDERSSON/JA A

INTERNATIONAL SEARCH REPORT

PCT/US 03/00741

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 239 348 B1 (METCALF RANDALL B) 29 May 2001 (2001-05-29) column 1, line 62 -column 3, line 31 --- A US 6 317 501 B1 (MATSUO NAOSHI) 13 November 2001 (2001-11-13) the whole document --- A EP 0 381 498 A (MATSUSHITA ELECTRIC IND CO LTD) 8 August 1990 (1990-08-08) the whole document -----	58, 59, 64 16-18, 20, 22, 45, 46, 51-57, 60-63, 65-75 1-75 1-75

INTERNATIONAL SEARCH REPORT

PCT/US 03/00741

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0869697	A	07-10-1998	US DE DE EP JP	6041127 A 69801785 D1 69801785 T2 0869697 A2 10285688 A		21-03-2000 31-10-2001 23-05-2002 07-10-1998 23-10-1998
US 6239348	B1	29-05-2001	AU AU CA EP WO WO US US	5916199 A 7130200 A 2343814 A1 1226572 A1 0118786 A1 0016306 A1 2003029306 A1 2002029686 A1		03-04-2000 10-04-2001 23-03-2000 31-07-2002 15-03-2001 23-03-2000 13-02-2003 14-03-2002
US 6317501	B1	13-11-2001	JP US US US	11018194 A 2002041693 A1 2002080980 A1 2002106092 A1		22-01-1999 11-04-2002 27-06-2002 08-08-2002
EP 0381498	A	08-08-1990	JP JP JP EP KR US	1996369 C 2205200 A 7028470 B 0381498 A2 9301076 B1 5058170 A		08-12-1995 15-08-1990 29-03-1995 08-08-1990 15-02-1993 15-10-1991